

**STATE FOREST LAND
ENVIRONMENTAL CHECKLIST**

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. Highlighted questions are supplemental to the standard SEPA checklist. These questions look at the proposed project in relationship to the surrounding landscape. Adjacency and landscape/watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at <http://www.dnr.wa.gov> under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the attached forest practice application acres, or the actual timber sale acres.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Timber Sale Name: **Rutsatz Pass Timber Sale** Agreement #: **30-072919**

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:

Northwest Region	Contact Person: Candace Johnson
919 North Township Street	Telephone: (360) 856-3500
Sedro-Woolley, WA 98284	

4. Date checklist prepared: **September 25, 2003**

5. Agency requesting checklist: **Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

- | | |
|----|--|
| a. | Auction Date: April 26, 2004 |
| b. | Planned contract end date (but may be extended): September 30, 2005 |
| c. | Phasing: Does not apply. |

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Timber Sale

- a. Site preparation: **Logging slash from landings generated on this proposal may be distributed throughout unit, allowing adequate planting spots.**
- b. Regeneration Method: **Hand plant Douglas fir and western red cedar at 360 stems/acre, tentatively scheduled for February 1, 2006.**
- c. Vegetation Management: **To be surveyed 3-5 years following planting to assess need for hand cutting or chemical treatment.**
- d. Thinning: **To be assessed 12-15 years following planting to verify need for PCT.**

Roads: New construction on Spur A will be abandoned, and the ND-1500 will have drivable water bars installed when sale is completed. Roads remaining active will access both State and private lands for future land management activities and will have routine annual maintenance, which may include ditch and culvert cleanout and road grading as needed.

Rock Pits and/or Sale: Existing DNR S-1100 and Red Mountain rock pits will continue to be used for future timber sales.

Other: Firewood cutting may be permitted following harvest.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☒303(d) – listed water body in Acme WAU: **South Fork Nooksack River** ☒ temp. ☐ sediment ☐ completed TMDL (total maximum daily load): see <http://www.ecv.wa.gov/programs/wq/wqhome.html>, report also available at the Northwest region office.

☒303(d) – listed water body in WAU: **Canyon Creek** ☒ temp. ☐ sediment ☐ completed TMDL (total maximum daily load): see <http://www.ecv.wa.gov/programs/wq/wqhome.html>, report also available at the Northwest region office.

☒303(d) – listed water body in WAU: **Middle Fork Nooksack River** ☒ temp. ☐ sediment ☐ completed TMDL (total maximum daily load): see <http://www.ecv.wa.gov/programs/wq/wqhome.html>, report also available at the Northwest region office.

☐Landscape plan:

☒Watershed analysis: **Final Acme Watershed Analysis** dated February 2000, available at the Northwest region office.

☐Interdisciplinary team (ID Team) report:

☒Road design plan: **Available at the Northwest region office.**

☐Wildlife report:

☐Geotechnical report:

☒Other specialist report(s): **Region Forest Hydrologist/Soils Specialist report** dated December 3, 2003, available at the Northwest region office.

☐Memorandum of understanding (sportsmen’s groups, neighborhood associations, tribes, etc.):

☐Rock pit plan:

☒Other: **Forest Resource Plan and Environmental Impact Statement, dated July 1992; Final Habitat Conservation Plan and Environmental Impact Statement, dated September 1997; State Soil Survey, dated 1992; available at the Northwest region office. Please see response to A13 for additional information regarding the 303(d) listed water bodies.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. **None.**

10. List any government approvals or permits that will be needed for your proposal, if known.

☐HPA ☐Burning permit ☐Shoreline permit ☐Incidental take permit ☒FPA # _____ ☐Other:

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description:

The proposal area considered for this activity is on approximately 75 acres, located in Section 3, Township 38 North, Range 05 East, and Section 34, Township 39 North, Range 05 East, W.M. approximately 1 mile southeast of Deming, WA. The proposal is surrounded by DNR ownership and large industrial ownerships with small private ownerships in the area. Field reconnaissance showed several streams incorrectly located on the state GIS database maps. These waters have all been typed according to the Western Washington Water Typing rules, WAC 222-16-031. The type 4 streams and their buffers have been excluded from the timber sale harvest area.

The net harvest area of 56.5 acres was determined using GPS. There will also be 1.2 acres of right-of-way timber removed. The timber sale unit boundaries are defined by Riparian Management Zones (RMZ’s), property lines, existing roads, and topographic breaks. The difference in gross proposal area vs. net harvest area is due to changes made to the boundary location during sale layout in addition to areas excluded for unstable slopes, leave tree clumps, eagle roost buffers, and RMZ’s. Leave trees have been established within the sale boundaries to protect several large, structurally unique wildlife trees. Slopes in the timber sale area range from 0-75%. Onsite rock may be utilized. Rock for new construction and maintenance requirements will come from the S-1100 rock pit and stockpiles located in Sections 1 and 2, Township 39 North, Range 05 East. Rip rap will come from the DNR’s Red Mountain quarry located in Section 23, Township 40 North, Range Range 05 East.

Net harvest area: 56.5 acres
Largest unit (Unit 2): 45.3 acres
Right-of-way area: 1.2 acres
Estimated volume: 1,524 MBF
Type of harvest: Regeneration harvest
Logging System: Ground-based and cable harvesting systems
Leave Tree Clump area: 2.9 acres
RMZ buffer area: 4.7 acres
Unstable slope area: 0.8 acres
New road construction: 1,960 feet
Road Reconstruction: 10, 824 feet
Road abandonment: 1,960 feet

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

This activity totals 57.7 acres and will retain 494 green trees scattered and clumped throughout the timber sale area. This regeneration harvest will be harvested using cable-yarding systems on slopes greater than 25% and ground-based harvest and cable-yarding systems on some slopes less than 25%. The proposed harvest area is located on a mostly eastern aspect and consists of a stand of natural second growth timber, primarily Douglas fir and western hemlock with minor components of western red cedar, red alder, and bigleaf maple with an origin date of approximately 1917. The average diameter of the Douglas fir in this stand is 28 inches dbh (diameter at breast height) with an average height of 180 feet. The average diameter of the western hemlock in this stand is 25 inches dbh with an average height of 170 feet. The stand has a volume varying from 35-45 mbf/acre. There is a small old growth Douglas fir component in unit 2 that will not be removed. Snags, cedar stumps, and down woody debris are components of this stand; these components will not be removed from the site. There is a sparse understory of western hemlock, moss, fern, salmonberry, and salal. This information is taken from the DNR Forest Resource Inventory System and onsite data collection during sale layout.

Objectives for the sale include generating revenue for the Forest Board Transfer and Scientific School trusts, maintaining the biological and structural diversity and productivity of the site, protecting water quality and fish & wildlife habitat, and minimizing the visual impact of the early seral forest growth stage. Scattered green trees are windfirm and have unique characteristics that will serve as a diverse, multi-layer canopy in the future stand. Areas with unstable slopes have been excluded from the harvest area in order to protect the integrity of the soil and water. The Rutsatz bald eagle winter communal night roost is located approximately 0.25 miles to the west of the proposal area. The S-1100 rock pit is located in the vicinity of the Hatchery Bear Creek bald eagle roost. Operational timing restrictions will help minimize impacts during peak seasonal roost activities.

c. Road activity summary. See also attached forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		1,960	0.7	0
Reconstruction		10,824		0
Maintenance		N/A		0
Abandonment		1,013	0.4	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	5			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. (See attached timber sale map. See also color landscape/WAU map on the DNR website <http://www.dnr.wa.gov> under “SEPA Center.”)

a. Legal description: **Section 3, Township 38 North, Range 05 East and Section 34, Township 39 North, Range 05 East, W.M.**

b. Distance and direction from nearest town (include road names): **Travel south 0.9 miles on Highway 9 from the junction with SR 542. Turn east onto Rutsatz county road and travel 2.7 miles to the DNR ND-1000 road. Turn south and travel 1.4 miles to the unit.**

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website <http://www.dnr.wa.gov> under “ SEPA Center.”)

WAU Name	WAU Acres	Proposal Acres
Acme	24,243	12
Sub-basin 8	1,969	12
Porter Canyon	18,862	46
Sub-basin 7	1,460	46

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website <http://www.dnr.wa.gov> under “SEPA Center” for a broader landscape perspective.)

The proposed timber sale is on the north end of the Van Zandt Dike. Sale elevation varies from 900 to 1,500 feet. Large industrial landowners own the majority of adjacent private land within the Acme and Porter Canyon WAU’s. The table below refers to information taken from the State GIS database.

WAU Name	Total WAU Acres	DNR Forested Acres in WAU	Percent DNR Managed Forestland In WAU	DNR Managed Forestland > 25 Years Old	Percent DNR Forestland > 25 Years Old	Private Managed Acres in WAU	Percent Private Managed Land	Proposal acres
Acme	24,243	6,296	26%	3,155	50%	17,961	74%	12
Porter Canyon	18,862	6,398	34%	4,583	72%	12,465	66%	46

Within the past 7 years in the Acme WAU, approximately 437 acres of land has been harvested from 9 even-aged regeneration sales on DNR managed land. These regeneration harvest sales include Waffle, 1500 Extension, Skeeter View, Dike Connector, Dike Quaker Blowdown, and portions of Barkstrip, Guava, Dike Molehill, and Dike Dolphin. There was also one thinning sale, Acme Thinning, located partly in this WAU.

Within the past 7 years in the Porter Canyon WAU, approximately 626 acres of land from 8 regeneration harvest sales has been harvested on DNR managed land, according to the attached SEPA maps. These sales, Facemask, Dike Molehill, Aqua Marine, Beyond Porter, Guava, Aqua Lung, Skeeter View, and Thousand Dishes.

This information was taken from past Forest Practices Applications. Environmental impacts due to harvest activities of past sales, have been mitigated on a site-by-site basis according to the guidelines set out in the Acme Watershed Analysis Prescriptions, Forest Practice (F.P.) Rules and Habitat Conservation Plan. Therefore, current and future management activities should not adversely contribute to cumulative environmental impacts. All the even-aged harvest areas have been replanted with Douglas fir and western red cedar seedlings.

Private landowners have completed several regeneration harvests in both WAU’s in accordance with the Forest Practices guidelines in the past 7 years, totaling approximately 1,500 acres in the Acme WAU and 900 acres in the Porter Canyon WAU. Private landowners have used a rotation age of 40-50 years of age. Future activities on private land are unknown. This data is based on the information taken from the attached SEPA maps dated August 1, 2003, and additional information available from the State GIS database as of September 8, 2003.

In the Acme WAU, there are currently 3 regeneration harvest and one thinning scheduled to be reviewed by the Board of Natural Resources in 2004; Loquat, 104 acres; Jack Straw Aerial, 95 acres; Small Deal, 29 acres; and Resurrection small wood thinning, 248 acres; There are 2 sold sales that have not begun harvesting, Bootjack, 79 acres, and Jack’s Boot, 77 acres, both located more than 7 miles from the current proposal. There are 2 sold sales currently being harvested, Van Zandt, 70 acres, located more than 4 miles from the current proposal; and Pitside Flats, 81 acres, located more than 1 mile from the current proposal.

In the Porter Canyon WAU, there is currently 2 regeneration harvest sold that are not harvested. Jorgensen, 40 acres, and, Liberty, 45 acres, located more than 4 miles from the current proposal. There is 1 regeneration harvest currently being harvested in the Porter Canyon WAU, Malcolm View, 70 acres, located more than 2 miles from the current proposal.

Environmental issues in the Acme WAU have been identified in the Final Acme Watershed Analysis, February 2000, which has developed prescriptions to mitigate any potential environmental impacts. There are 2 listed 303(d) waterbodies within the Acme WAU on the South Fork Nooksack River. There are 2 listed 303(d) waterbodies within the Porter Canyon WAU on the Middle Fork Nooksack River and Canyon Creek. This proposal is located below tributaries of the listed portion on the Middle Fork; where no impact is expected. Proposed road construction and timber harvest activities comply with slope stability protection requirements in the Acme Watershed Analysis Prescriptions. Environmental issues have been mitigated in the current proposal to assure this activity and future activities adjacent to this proposal will not contribute to an increased chance of environmental impact. The type 4 streams have Riparian Management Zones buffering them. This will reduce potential for sediment delivery to the streams and preserve water quality. All exposed soils associated with road construction will be grass-seeded to minimize erosion. Ground-based harvesting, road construction, and hauling of forest products may be restricted to the dry season. The Riparian Management Zones and wildlife trees will serve to maintain diversity, reduce soil erosion, and provide current and recruit future wildlife habitat. The Rutsatz bald eagle winter communal night roost is located approximately 0.25 miles to the west of the proposal area. Operational timing restrictions from November 1 to February 15 will help minimize impacts during peak seasonal roost activities. Two years of marbled murrelet surveys to assess the site have been completed. No detections were recorded. A total of 494 leave trees have been retained to preserve structural diversity for wildlife habitat. Several old growth remnants will be retained via this leave tree strategy. The site will be replanted within 2 years of harvest with Douglas fir and western red cedar. The current activity complies with the final Habitat Conservation Plan (HCP), Implementation Agreement, Incidental Take Permits, Forest Resource Plan, and Acme WAU prescriptions.

Future activities within the Acme WAU in fiscal year 2005 may include road construction, silvicultural activities, and 1 regeneration harvest, Going Beyond, 83 acres. Future activities within the Porter Canyon WAU in fiscal year 2005 may include road construction, silvicultural activities, and 1 regeneration harvest, Saint Stephen, 102 acres. These activities will continue to follow the Forest Practices Rules, Forest Resource Plan, Implementation Agreement, Incidental Take Permits, and the HCP. Activities within the Acme WAU also comply with the final Acme Watershed Analysis prescriptions. This will ensure that all aspects of the environment are adequately protected and preserved and serve to minimize the chance of adverse cumulative environmental impacts. These scheduled activities combined with the current and past proposals will increase the structural diversity of the forest stands within the WAU by removing uniform mature timber stands approximately 60 years of age and replacing them with planted conifer stands interspersed with legacy and wildlife trees.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☐Hilly, ☐Steep Slopes, ☒Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone). The Acme WAU is defined by the South Fork Nooksack River Valley, the eastern slopes of Stewart Mt., and the western slopes of the Van Zandt Dike. It is comprised of forested slopes that drain into the lower part of the South Fork Nooksack River. The elevation ranges from 300 feet to over 3,000 feet. The climate is typical of the western slopes of the Cascade Range, with influences from Mt. Baker and the Fraser River Valley. The yearly precipitation is 50-60 inches throughout the WAU with a 10-year 24-hour storm event of 3 inches. The forest vegetation zone is the West Cascade hemlock zone with the major timber type being Douglas fir with western red cedar and western hemlock as sub-species. A hardwood component of big leaf maple, red alder, and cottonwood is present at lower elevations.

The Porter Canyon Creek WAU is mountainous; it consists of valley bottom and steep sided mountains ranging in elevation from 600 ft to 5,000 feet. The Van Zandt Dike is the western border, the Clearwater drainage is the eastern boundary, the North Fork Nooksack River is the northern boundary, and the height of land between the Middle Fork Nooksack River and Hutchinson Creek defines the southern boundary. Landforms are of glacial, glacial fluvial, and fluvial origin. Most of the WAU is forested with scattered parcels of cleared private land in the valley bottoms. The forest vegetation zone is the West Cascade hemlock zone with the major timber type being second growth Douglas fir with western red cedar, western hemlock, and red alder as sub-species. The Middle Fork Nooksack River is the major water body found in the central portion of the WAU. The climate is typical of the foothills of the western Cascades.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s). The proposal is located at 900-1,500 feet in elevation. The unit has virtually all the elements listed in the previous section. Information based on local knowledge, aerial photos, and field verification.

b. What is the steepest slope on the site (approximate percent slope)? Slopes up to 75% are on approximately 8% of the harvest area. The average slope is 25-50%.

- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
0966	Cathcart	30-60	45	Medium	Medium
9078	Welcome	30-60	13	Medium	Medium

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

- 1) Surface indications: **There are several shallow slope failures on the steep hillside of the Van Zandt Dike along short stretches of existing active and abandoned roads. These areas are located approximately 0.5 miles to the south of the current proposal. Also, steeper portions of hillside in the immediate vicinity have had mass wasting events.**
- 2) Is there evidence of natural slope failures in the sub-basin(s)?
☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics: **Natural failures can be found in concave, convergent topography formed by large, ancient slope failures. Minor stream bank failures along inner gorges and small shallow-rapid slides are also common throughout the sub-basins according to aerial photo evidence.**
- 3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?
☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics: **Shallow failures have been located on old road grades more than 20 years old on steep sides of the Van Zandt Dike. In Section 14 and 3, Township 38 North, Range 05 East, a number of slides of varying size were observed originating from roads and landings on steep mid mountain slopes. The cause appears to be movement of old side cast material. The age of these road networks varies between 10-35 years.**
Associated management activity: **Failures identified are from road construction and old railroad grades caused by inadequate drainage. This information was verified using aerial photos and inspected in the field.**
- 4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?
☐No ☒Yes, describe similarities between the conditions and activities on these sites:
There is evidence that there are slope failures caused by natural processes on the hillside adjacent to the proposal location.
- 5) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal. **Newly constructed roads will be crowned, ditched, and cross-drained. Soils exposed during road construction will be grass-seeded. 1,013 feet of new road (Spur A) will be abandoned. The ND-1500 will have drivable water bars installed at completion of use. Ground-based harvesting may not be permitted from November 1 to March 31 to prevent compaction and rutting. Ground based yarding will occur only on slopes less than 25% and cable harvesting will occur on slopes greater than 25%. Logs will have lead end suspension for all cable yarding. Road construction operations, rock haul, and hauling of forest products may be restricted to the dry season. Boundary locations have been located in stable areas only. This proposal is consistent with guidelines in the Forest Practices Rules, Acme Watershed Analysis prescriptions and the DNR's HCP.**

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: **0.7 acres** Approx. acreage new landings: **1.5 acres** Approx. acreage rock pit fills: **N/A**
Fill source: **Native material where possible. Road surfacing material will come from the S-1100 rock pit and stockpiles located in Sections 1 and 2, Township 39 North, Range 05 East. Rip rap will come from the DNR's Red Mountain quarry located in Section 23, Township 40 North, Range 05 East, W.M..**
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. **Erosion could result from road and landing construction during periods of heavy rainfall or as a result of yarding during periods of saturation. Additionally, erosion could result if ditches and culverts are not properly installed and maintained during and after the harvest operation. Erosion could also occur if stream banks are damaged. Road use during unfavourable weather conditions may contribute to an increased potential for surface erosion.**
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? Approximate percent of proposal in permanent road running surface (includes gravel roads): **Approximately 1% of the sale area will be permanent gravel forest road.**
- h. Propose measures to reduce or control erosion, or other impacts to the earth, if any: (Include protection measures for minimizing compaction or rutting) **Roads will be surfaced with gravel. All ditches will be excavated along roads to collect surface runoff which will be discharged onto stable areas of the forest floor or natural drainages through ditch outs and cross drain culverts. Catch basins and rock head walls at culvert inlets will be installed where required. Abandonment of newly constructed roads within the sale boundary will occur according to the NW region road abandonment policy. All freshly exposed soils associated with road construction will be grass seeded. The combination of harvesting schedule and recommended yarding strategies will alleviate or minimize erosion. Down woody debris and stumps will not be removed thus impeding the flow of surface water. Ground-based yarding and mechanized falling may be restricted from November 1 to March 31. Areas with sensitive soils delineated on the timber sale map will be cable yarded only. Contract and road plan provisions ensure that all operations will cease during periods of unfavourable weather during any time of the year. Harvested area will be reforested with Douglas fir and western red cedar seedlings at 360 trees per acre within two years of the expiration of the contract.**

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust from truck traffic, rock mining, crushing or hauling, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known. **No emissions are anticipated other than minor amounts of equipment exhaust and road dust created by truck traffic.**
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **None.**
- d. Proposed measures to reduce or control emissions or other impacts to air, if any: **Dust abatement will occur on the first 600 feet of the S-1000 as needed when hauling. Dust abatement treatments will use water, a mixture of water and lignin or other methods if available.**

3. Water

a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (See attached timber sale map and forest practice base maps.)
- a) Downstream water bodies: **Middle Fork Nooksack River**
- b) Complete the following riparian & wetland management zone table:
- | Wetland, Stream, Lake, Pond, or Saltwater Name (if any) | Water Type | Number (how many?) | Avg RMZ/WMZ Width in Feet (per side for streams) |
|---|------------|--------------------|--|
| Unnamed stream | 4 | 2 | 100 |
| Unnamed stream | 5 | 3 | N/A |
- c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.
A type 4 stream is located to the north of Unit #1. There is 1 type 4 stream on the south boundary of Unit #2. They have been excluded from the sale area and are protected by 100-foot no-entry RMZ buffers. There are 2 type 5 streams located in the southwest corner of Unit #2 and a type 5 stream located outside the northeast boundary of Unit #2. The streams to the south of Unit #2 flow into the Middle Fork Nooksack River.
- 2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐No ☒Yes (See RMZ/WMZ table above and attached timber sale map.)
Description (include culverts): **Harvesting will occur no closer than 100 feet to the type 4 streams. Cables for yarding operations may be suspended over the type 4 streams in order to increase deflection. Roads along the haul route pass through existing RMZ's and WMZ's. New road construction does not cross any typed streams. Maintenance of these roads is the only scheduled activity.**
- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. **No material will be placed in or dredged from surface waters or wetlands during the course of this proposal.**
- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (Include diversions for fish-passage culvert installation.)
☒No ☐Yes, description:
- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒No ☐Yes, describe location:
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipate volume of discharge.
☒No ☐Yes, type and volume: **A clause in the contract prohibits operators from discharging materials into surface waters.**
- 7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?
Yes, there are steep slopes and incised channels in the Acme WAU that may be susceptible to surface erosion. Due to the seasonal flow of streams, and seasonal operation period, it is unlikely that eroded material will enter surface waters. Information was taken from the region soils specialist report, the state GIS SEPA Evaluation Report dated September 8, 2003, and aerial photos.
High Erosion Potential: Acme WAU: 23%, Sub-basin 7: 50%
High Mass Wasting Potential: Acme WAU: 23%, Sub-basin 7: 50%
High Erosion Potential: Porter Canyon WAU: 32%, Sub-basin 8: 10%
High Mass Wasting Potential: Porter Canyon WAU: 31%, Sub-basin 8: 12%
- 8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐No ☒Yes, describe changes and possible causes: **There is evidence from state GIS data and aerial photos that show minor changes to the channels of some streams within the WAU's. Shallow rapid failures and stream bank erosion have occurred in the WAU and sub-basins during peak flow events. These events have been observed in the field as naturally occurring and form management derived activities due to inadequate drainage.**

- 9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒No ☐Yes, explain: **There should be little effect to stream water quality. Road construction, hauling, and harvesting operations may be restricted from November 1 to March 31 and are not permitted during unfavourable weather conditions at any time of the year, minimizing impact from this proposal to water quality.**
- 10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?
As of September 8, 2003;
Acme WAU: 3.9 mi/mi²
Sub-basin 7: 4.4 mi/mi²

Porter Canyon WAU: 3.4 mi/mi²
Sub-basin 8: 3.9 mi/mi²
The percentage of roads carrying water is unknown. This information is from the state GIS data layer.
Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒No ☐Yes, describe:
- 11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.
☒No ☐Yes, approximate percent of WAU in significant ROS zone. Approximate percent of sub-basin(s):
- 12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?
- 13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☐No ☒Yes, describe observations: **Shallow rapid failures and stream bank erosion have occurred in the WAU and sub-basins during peak flow events. These events have been observed in the field as naturally occurring and from management derived activities due to inadequate drainage.**
- 14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact. **The proposal is located in the rain-dominated zone; Activities from this proposal are not expected to add to peak flow.**
- 15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☒No ☐Yes, possible impacts:
- 16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts. **Streams having perennial flow have been excluded from the sale area. Road construction and harvesting operations will be restricted during unfavourable weather conditions further reducing the potential for impact to water quality. Also see B.1.h.**

b. Ground Water:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known. **Ground water recharge may increase directly below culvert outlets.**
- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. **Insignificant amounts of oil and other lubricants could be inadvertently spilled as a result of heavy equipment use. No lubricants will be disposed of on site.**
- 3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?
☒No ☐Yes, describe:

a) Note protection measures, if any. **See 3.a.16 above.**

c. Water Runoff (including storm water):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. **Intercepted surface storm water from rain and snow melt and intercepted ground water from road cut banks will be collected into roadside ditches and discharged onto stable areas of the forest floor, or into natural drainage areas through cross drain culverts and ditches. All discharged water associated with this proposal is tributary to the Middle Fork Nooksack River via streams and other typed waters. New road construction does not cross any typed waters.**
- 2) Could waste materials enter ground or surface waters? If so, generally describe. **Erosion and mass wasting are unlikely, provided appropriate forest practices are used during road construction and timber harvesting near typed waters.**

a) Note protection measures, if any. **Timber will be felled away from typed waters. All type 4 streams have been excluded from the timber sale area with 100 foot no-entry RMZ buffers.**

- d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
Soils exposed during road construction will be grass-seeded. Crowned and rock surfacing on all roads will reduce dissolved soils from entering natural waters. Catch basins and rock head walls at culvert inlets will be installed according to Forest Practice requirements. See surface water, ground water, and water runoff sections, questions B-3-a-1-c, B-3-a-2, B-3-a-16, and B-3-c-2-a.

4. Plants

- a. Check or circle types of vegetation found on the site:
- ☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☒cottonwood, ☐western larch, ☐birch, ☐other:
☒evergreen tree: ☒Douglas fir, ☐grand fir, ☐Pacific silver fir, ☐ponderosa pine, ☐lodgepole pine,
☐western hemlock, ☐mountain hemlock, ☐Englemann spruce, ☒Sitka spruce,
☐red cedar, ☐yellow cedar, ☐other:
☒shrubs: ☐huckleberry, ☒salmonberry, ☒salal, ☒other: Oregon grape, sword fern
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☐skunk cabbage, ☒devil's club, ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☒other types of vegetation: mosses
☐plant communities of concern:
- b. What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.) **Timber approximately 86 years old will be removed from 57.7 acres with clumped and scattered retention trees throughout the units. Understory vegetation within the sale area will be disturbed during road construction, timber falling, and yarding activities.**
- 1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: <http://www.dnr.wa.gov> under “SEPA Center.”)
The timber sale area consists of 2 units surrounded by DNR and private ownership. The attached SEPA maps dated August 1, 2003 show activities in the adjacent stands over the past several years.

Unit #1 and #2 are bounded by a 25-year DNR old conifer stand to the north and +60 year old DNR timber to the east & west. A private 10-year-old conifer stand is located to the south of Unit #1 and to the northeast of Unit #2. Unit 2 has 60-year-old DNR timber to the south and southeast.

The most common tree species of timber are Douglas fir, western hemlock, western red cedar, red alder, and big leaf maple. The average diameter of the timber to be removed is 25-28 inches. The younger DNR conifer stands are planted with Douglas fir and western red cedar with natural western hemlock.
- 2) Retention tree plan: **Objectives of the green tree retention plan include: creating structural diversity, maintaining down woody debris attributes, preserving the old growth remnant component of the stand, preserving and providing microhabitats that are spatially unique, and minimize the visual impact of the early seral stage. These objectives will be achieved while complying with the requirements of the Forest Resource Plan and HCP.**

A minimum of 8 trees/acre with diameters greater than 12 inches are scattered and clumped in several clumps throughout the sale area totaling 494 trees. Scattered windfirm trees from diameter classes between 25-30 inches DBH were retained. Scattered trees include those that show structural characteristics that are important to wildlife, such as broken tops, large limbs, forks & crooks; primarily from dominant and co-dominant crown classes. All other snags, all western red cedar stumps, and down woody material is to be left; however, some snags may need to be felled due to L&I requirements. At least 2 downed logs greater than 12 inches at the small end will be present upon the completion of the contract. RMZ's of 100 feet will retain timber adjacent to the type 4 streams.
- c. List threatened or endangered plant species known to be on or near the site. **DNR's TRAX system indicates no known threatened or endangered plant species.**
- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: **Wildlife & green trees, and RMZ's will contribute to natural regeneration. Douglas fir and western redcedar will be planted at 360 stems/acre within two years of timber harvest. See 4.b.2 above.**

5. Animal

- a. Circle or check any birds animals or unique habitats which have been observed on or near the site or are known to be on or near the site:
- birds: ☒hawk, ☐heron, ☐eagle, ☐songbirds, ☐pigeon, ☐other:
mammals: ☒deer, ☐bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☒trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐talus slopes, ☐caves, ☒cliffs, ☐oak woodlands, ☐balds, ☐mineral springs
- b. List any threatened or endangered species known to be on or near the site (include federal- and state-listed species). **DNR's TRAX system indicates that the Rutsatz bald eagle winter communal night roost is located approximately 0.25 miles to the west of the proposal area.**
- | Unit | Common Name | Federal Listing Status | WA State Listing Status |
|------|-------------|------------------------|-------------------------|
| 1 | BALD EAGLE | THREATENED | THREATENED |
| 2 | BALD EAGLE | THREATENED | THREATENED |

- c. Is the site part of a migration route? If so, explain.
☒ Pacific flyaway ☐ Other migration route: Explain if any boxes checked: **All of Washington State is considered part of the Pacific flyway. No impacts are anticipated as a result of this proposal being completed.**
- d. Proposed measures to preserve or enhance wildlife, if any: **Riparian Management Zones and wildlife trees (including damaged, defective, dying, and dead trees, all still standing) will serve as habitat for several bird and wildlife species. The purchaser will not remove the downed logs, stumps, or snags. A total of 494 green trees with diameters greater than 12-inch dbh, primarily from the 25-30 inch diameter classes, will be retained within the harvest area. Douglas fir and western red cedar will be planted within two years of the timber harvest. Have completed two years of marbled murrelet surveys. No detections were recorded.**
- 1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.
Species /Habitat: **Bald Eagle**
Protection Measures: **All harvest and hauling activities in units 1 and 2 and along the ND-1000 adjacent to the Rutsatz/Van Zandt eagle roost will be restricted from November 1 to February 15 to minimize impacts to eagles during their peak seasonal activity period. The S-1100 rock pit haul route is located immediately adjacent to the “Hatchery/Bear Creek” eagle roost. The current eagle management strategy in this area calls for restrictions from Dec 1 to Feb 15 on activities within 700 ft of the roost staging trees.**
- Species /Habitat: **Marbled Murrelets**
Protection Measures: **There is no “re-classified” modeled marbled murrelet habitat in the area. Both units contain “re-classified plus” modeled marbled murrelet habitat. Two years of marbled murrelet surveys in the sale proposal area and vicinity have been completed as of August 2003. No detections were recorded. Trees with platforms have been marked to remain as part of our legacy tree strategy.**

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project’s energy needs? Describe whether it will be used for heating, manufacturing, etc. **Does not apply.**
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. **Does not apply.**
- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: **Does not apply.**

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe. **There is minimal hazard due to heavy equipment operations. There is a potential fire hazard if operating in moderate fire weather conditions during the summer.**
- 1) Describe special emergency services that might be required. **Does not apply.**
- 2) Proposed measures to reduce or control environmental health hazards, if any: **None.**
- b. Noise
- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? **Noise from trucks and logging equipment will be present while operating during daylight hours.**
- 2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site. **There will be noise during daylight hours on a short-term basis from heavy equipment, log trucks, and chain saws during road construction and logging.**
- 3) Proposed measures to reduce or control noise impacts, if any: **None.**

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? (Site includes the complete proposal, e.g. rock pits and access roads.) **State and privately owned commercial forestry land surrounds the proposal area.**
- b. Has the site been used for agriculture? If so, describe. **No.**
- c. Describe any structures on the site. **Does not apply.**
- d. Will any structures be demolished? If so, what? **Does not apply.**
- e. What is the current zoning classification of the site? **Does not apply.**
- f. What is the current comprehensive plan designation of the site? **Commercial forestry.**
- g. If applicable, what is the current shoreline master program designation of the site? **Commercial forestry.**
- h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify. **Does not apply.**
- i. Approximately how many people would reside or work in the completed project? **Does not apply.**
- j. Approximately how many people would the completed project displace? **Does not apply.**

- k. Proposed measures to avoid or reduce displacement impacts, if any: **Does not apply.**
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: **The design of this project is consistent with current comprehensive plans and zoning regulations.**

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. **Does not apply.**
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. **Does not apply.**
- c. Proposed measures to reduce or control housing impacts, if any: **Does not apply.**

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed? **Does not apply.**
- b. What views in the immediate vicinity would be altered or obstructed? **Approximately 57.7 acres of timber approximately 86 years old will be regeneration harvested with clumped and scattered green trees retention.**
 - 1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☒ No ☐ Yes, viewing location:
 - 2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☒ No ☐ Yes, scenic corridor name:
 - 3) How will this proposal affect any views described in 1) or 2) above? **No views will be impacted.**
Proposed measures to reduce or control aesthetic impacts, if any: **Use of scattered and clumped leave trees and RMZ buffers will provide structural and spatial diversity and will reduce aesthetic impacts. These green trees used in conjunction with RMZ's will minimize the visual impact on the early seral forest growth stage. Replanting with Douglas fir and western red cedar seedlings at 360 stems/acre within two years of harvest will also serve to reduce any aesthetic impacts.**

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? **Does not apply.**
- b. Could light or glare from the finished project be a safety hazard or interfere with views? **Does not apply.**
- c. What existing off-site sources of light or glare may affect your proposal? **Does not apply.**
- d. Proposed measures to reduce or control light and glare impacts, if any: **None.**

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity? **Hunting, berry picking and hiking.**
- b. Would the proposed project displace any existing recreational uses? If so, describe: **No.**
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: **None.**

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe. **No.**
- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site. **Several bark stripped trees are located within the proposal area.**
- c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.) **Maps and a work schedule for the proposal area were sent to the Lummi Nation and the Nooksack tribe in January 2001 to allow them to assess the area for cultural significance. The local tribes identified several culturally sensitive areas in the sale area. These areas have been mitigated on a site-by-site basis to the satisfaction of the tribes involved.**

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. **The proposal area can be accessed via the DNR ND-1000 mainline from Rutsatz Pass County road.**
 - 1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)? **No.**
- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop? **No.**
- c. How many parking spaces would the completed project have? How many would the project eliminate? **None.**
- e. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private). **There will be 1,960 feet of new forest road construction and 10,824 feet of reconstruction.**

- 1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all? **There will be increased truck traffic for rock hauling during road construction and timber hauling during timber harvest period. An average of 10-15 round trip rock or log truckloads may be moved each day during construction and harvest operations.**

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. **No.**
- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur. **None.**
- g. Proposed measures to reduce or control transportation impacts, if any: **Safe operation of vehicles and use of signs will be encouraged.**

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe. **There will be an increased potential for forest fires for 3-5 yrs after harvest until logging debris breaks down and the unit is once again under vegetation.**
- b. Proposed measures to reduce or control direct impacts on public services, if any. **Restrict access during periods of extreme fire hazard. Operations will cease during periods of extremely low humidity (less than 30%).**

16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other. **Does not apply.**
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. **Does not apply.**

C. **SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: _____, Date: _____
Title

Reviewed by: _____, Date: _____
Title

Approved by: _____, Date: _____
Title